

Listing of Claims

1. (Currently Amended) A high-frequency system for an MR apparatus with a high-frequency coil arrangement comprising a plurality of resonator elements ~~(104)~~, which coil arrangement is coupled to a transmit unit ~~(106)~~, where a respective transmit channel ~~(1-8)~~ of the transmit unit ~~(106)~~ is assigned to the resonator elements ~~(104)~~, ~~characterized in that~~ wherein the transmit unit ~~(106)~~ comprises with a plurality of high-frequency amplifiers ~~(107)~~, the inputs of which can receive low-power transmit signals via a first controllable multiplexer/distributor network ~~(108)~~, in which the output signals of the high-frequency amplifiers ~~(107)~~ can be distributed over the transmit channels ~~(1-8)~~ via a second controllable multiplexer/distributor network ~~(109)~~.
2. (Currently Amended) A high-frequency system as claimed in claim 1, ~~characterized by~~ wherein a control unit ~~(110)~~ is assigned to the transmit unit ~~(106)~~ for activating the multiplexer/distributor networks ~~(108, 109)~~.
3. (Currently Amended) A high-frequency system as claimed in claim 2, ~~characterized in that~~ wherein the gain factor of each high-frequency amplifier ~~(107)~~ of the transmit unit ~~(106)~~ can be controlled via the control unit ~~(110)~~.
4. (Currently Amended) A high-frequency system as claimed in claim 3, ~~characterized by~~ wherein measurement sensors ~~(111)~~, coupled to the control unit ~~(110)~~, ~~which~~ serve for determining the high-frequency field strength generated by means of the individual resonator elements ~~(104)~~.
5. (Currently Amended) A high-frequency system as claimed in ~~any one of~~ claims 1 to 4, ~~characterized by~~ having a plurality of controllable high-frequency signal generators ~~(113)~~ for generating the low-power transmit signals.
6. (Currently Amended) A high-frequency system as claimed in ~~any one of~~ claims 1 to 5, ~~characterized in that~~ wherein the amplitudes and phases of the high-frequency signals supplied to the resonator elements ~~(104)~~ via the transmit channels ~~(1-8)~~ are individually preselectable.

7. (Currently Amended) A high-frequency system as claimed in ~~any one of claims 1 to 6~~, ~~characterized by having~~ a receive unit (116) with a plurality of receive channels (a-j) assigned to the respective resonator elements (104).

8. (Currently Amended) A high-frequency system as claimed in ~~any one of claims 1 to 7~~, ~~characterized by having~~ isolators (124), these being connected between the outputs of the high-frequency amplifiers (107) and the corresponding inputs of the second controllable multiplexer/distributor network (109) and/or between the outputs of the second controllable multiplexer/distributor network (109) and the corresponding resonator elements (104) of the high-frequency coil arrangement.

9. (Currently Amended) An MR apparatus with a main field coil for generating a homogeneous, static magnetic field in an examination volume (100), a number of gradient coils (103) for generating magnetic field gradients in the examination volume (100), a high-frequency system for generating high-frequency fields in the examination volume (100) and for acquiring MR signals from the examination volume (100), and with a central control unit (122) for activating the gradient coils (103) and the high-frequency system, and a reconstruction and display unit (120, 121) for processing and displaying the MR signals, ~~characterized in that~~ wherein the design of the high-frequency system is as claimed in ~~any one of claims 1 to 8~~.